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**CLAIMS**

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[Claim(s)]

[Claim 1]Microwave discharge light equipment comprising:

A magnetron which generates microwave.

A resonator which said microwave was resonated and formed an opening to which light is made to emit.

The 1st lamp section that enclosed rare gas and a discharge medium which are formed in said resonator and discharged by said microwave, and formed a longitudinal direction in a long picture toward said opening side.

An electrodeless lamp formed in one by the 2nd lamp section that enclosed only rare gas discharged by said microwave and covered a longitudinal direction outer peripheral part of said 1st lamp section, A magnetic force generating means which generates a line of magnetic force parallel to a longitudinal direction of the 1st lamp section of said electrodeless lamp, and an emission direction of emitted light from this electrodeless lamp.

[Claim 2]Microwave discharge light equipment comprising:

A magnetron which generates microwave.

A resonator which said microwave was resonated and formed an opening to which light is made to emit.

The 1st lamp section that enclosed rare gas and a discharge medium which are formed in said resonator and discharged by said microwave, and formed a longitudinal direction in a long picture toward said opening side.

An electrodeless lamp formed in one by the 2nd lamp section that enclosed only rare gas discharged by said microwave and covered a longitudinal direction outer peripheral part of said 1st lamp section, A magnetic force generating means which generates a line of magnetic force parallel to a longitudinal direction of the 1st lamp section of said electrodeless lamp, and an

emission direction of emitted light from this electrodeless lamp, and a loop gap resonator with which it was provided on an optic axis of emitted light from said electrodeless lamp, and electromagnetic induction nature and electric capacity nature were combined.

[Claim 3]said loop gap resonator -- an approximate circle -- forming tubular -- and an inside diameter of this loop gap resonator -- a diameter of a lamp of the 1st lamp section of said electrodeless lamp -- smallness -- the microwave discharge light equipment according to claim 2 characterized by things.

[Claim 4]Microwave discharge light equipment of claim 1 carrying out the opening of said opening formed in said resonator to substantial verticality to the direction of said line of magnetic force - claim 3 given in any 1 paragraph.

[Claim 5]Microwave discharge light equipment of claim 1 characterized by making it said magnetic force generating means generate said line of magnetic force with a permanent magnet - claim 4 given in any 1 paragraph.

[Claim 6]Microwave discharge light equipment of claim 1 characterized by making it said magnetic force generating means generate said line of magnetic force with a magnet coil - claim 4 given in any 1 paragraph.

[Claim 7]an effective area product of said opening formed in said resonator -- a diameter of a lamp of the 1st lamp section of said electrodeless lamp -- smallness -- microwave discharge light equipment of claim 1 characterized by things thru/or claim 6 given in any 1 paragraph.

[Claim 8]An image display device using microwave discharge light equipment of claim 1 thru/or claim 7 given in any 1 paragraph as a light source for projection for image display.

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